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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/512,030	06/21/2005	Tito Bacarese-Hamilton	FBU-001US	2254

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EXAMINER	
NUR, ABDULLAHI	

ART UNIT	PAPER NUMBER
2877	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/512,030	BACARESE-HAMILTON ET AL.	
	Examiner	Art Unit	
	Abdullahi Nur	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10 and 13-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,10,13-20 and 22-25* is/are rejected.

7)☒ Claim(s) *6-8,21,26 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's argument filed on 9/27/2007 with respect to claims 1-12 is acknowledged.

1. Applicant's arguments with respect to claims *1-8, 10 and 13-27* have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 4, 5, 10, 14-19, 22, 23, and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Naghieh et al. (US Patent # 6,754,414 B2)[hereinafter Naghieh].

As to claims 1 and 10, Naghieh teaches a device for analyzing fluorescent signals emitted from fluorescently labeled material bound to a microarray assay of the type having at least one microspot deposited on a substantially flat surface, the device comprising: an illuminator 14 for illuminating the fluorescently labeled material at an appropriate wavelength to induce fluorescence; a detector 36 for detecting fluorescent signals emitted by the fluorescently labeled material; a signal processor 38 for processing the signals detected; an optical system having an excitation optical path and

a detection optical path (Fig.3); the illuminator comprising a light emitting diode (column 3, line 66) arranged to illuminate the material with incoherent illumination and to simultaneously illuminate all, or a substantial portion of-at least one microspot (column 6, lines 20-21).

As to claim 2, Naghieh teaches all as applied to claim 1, and in addition teaches an excitation filter 16 positioned in the excitation optical path to filter out longer wavelengths emitted by the LED before they reach the material to be analyzed.

As to claim 4, Naghieh teaches all as applied to claim 1, and in addition teaches comprising an emission filter 32 positioned in the detection optical path to filter out any directly reflected illumination from the material.

As to claim 5, Naghieh teaches all as applied to claim 1, and in addition teaches a flat surface comprising a glass slide (column 3, lines 53-55).

As to claim 14, Naghieh teaches all as applied to claim 1, and in addition teaches a device wherein the fluorescently labeled material is bound to plural microspots, and the microspots are deposited in an array on the substantially flat surface (column 3, lines 43-55).

As to claim 15, Naghieh teaches all as applied to claim 1, and in addition teaches the flat surface comprising a plate used for microarray assay or immunoassay type tests (column 3, lines 43-55).

As to claims 16-19, Naghieh teaches all as applied to claim 1, and in addition teaches a device wherein the light emitting diode illuminates an area at the location of the microspot having a diameter in the said range (column 6, lines 40-43).

As to claim 22, Naghieh teaches all as applied to claim 10, and in addition teaches a method further comprising: providing fluorescently labeled material bound to plural microspots, the microspots deposited in an array on a substantially flat surface (column 3, lines 43-55).

As to claim 23, Naghieh teaches all as applied to claim 10, and in addition teaches a method further comprising: placing an excitation filter 16 in an excitation optical path between the LED and the at least one microspot, the excitation filter substantially preventing longer wavelengths emitted by the LED from reaching the at least one microspot (column 5, lines 53-67).

As to claim 25, Naghieh teaches all as applied to claim 10, and in addition teaches an emission filter 32 in a detection optical path between the at least one microspot and the optical detector, the emission filter substantially preventing any illumination directly reflected from the sample from reaching the detector (column 6, lines 29-34).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 13, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghieh.

As to claims 3 and 24, Naghieh teaches all as applied to calims 2 and 10, except for the excitation filter being a short band pass filter. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a short band pass filter in Naghieh apparatus, in order to transmit optical signals having wavelengths that are less than a nominal maximum wavelength.

As to claim 13, Naghieh teaches all as applied to calim 1, except for the oscillating electrical source driving the light emitting diode such that the intensity of light from the diode is modulated in time. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide oscillating electrical source driving the light emitting diode such that the intensity of light from the diode is modulated in time, in order to increase the quality of the excitation signal. This modulated electromagnetic radiation allows that the amplitude and or/frequency of the radiation be controlled in a reproducible way.

As to claim 20, Naghieh teaches all as applied to calim 1, except for the signal processor that comprises a lock-in amplifier combined with a voltage meter. It would have been obvious to one of ordinary skill in the art at the time the invention was made

to use a processor with a lock-in amplifier, in order to amplify optical signal directed in the said processor.

Allowable Subject Matter

1. Claims 6-8, 21, 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

2. The following is a statement of reasons for the indication of allowable subject matter:

As to claim 6, prior art of record, taken alone or in combination, fails to disclose or render obvious a device comprising a polarizing filter positioned in the excitation optical path and a second polarizing filter positioned in the detection optical path and orientated at right angles to the first polarizing filter such that the two filters comprise crossed polarizers positioned in the excitation and the detection optical paths respectively.

As to claim 7, prior art of record, taken alone or in combination, fails to disclose or render obvious a device further comprising a polarizing beam splitter positioned to lie in both the excitation and detection optical paths.

3. As to claim 8, prior art of record, taken alone or in combination, fails to disclose or render obvious a device wherein the signal processor comprises a phase sensitive detector.

As to claim 21, prior art of record, taken alone or in combination, fails to disclose or render obvious a method further comprising: modulating the intensity level of the

incoherent illumination from the LED; and processing the signal from the optical detector with phase-sensitive detection instruments.

As to claim 26, prior art of record, taken alone or in combination, fails to disclose or render obvious a method according to claim 10 further comprising: placing a polarizing filter in an excitation optical path between the LED and the at least one microspot; andplacing a second polarizing filter in a detection optical path between the sample and the detector, the second polarizing filter optically orientated substantially 90 degrees to the first polarizing filter such that the two filters comprise crossed polarizers positioned in the excitation and the detection optical paths.

As to claim 27, prior art of record, taken alone or in combination, fails to disclose or render obvious a method further comprising:placing a polarizing beam splitter at a location having coincidence of an excitation optical path between the LED and the at least one microspot and a detection optical path between the at least one microspot and the detector.

Several facts have been relied upon from the personal knowledge of the examiner about which the examiner took Official Notice. Applicant must seasonably challenge well known statements and statements based on personal knowledge when they are made by the Board of Patent Appeals and Interferences. In re Selmi, 156 F.2d 96, 70 USPQ 197 (CCPA 1946); In re Fischer, 125 F.2d 725, 52 USPQ 473 (CCPA 1942). See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice). If

applicant does not seasonably traverse the well-known statement during examination, then the object of the well known statement is taken to be admitted prior art. In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). A seasonable challenge constitutes a demand for evidence made as soon as practicable during prosecution. Thus, applicant is charged with rebutting the well-known statement in the **next reply** after the Office action in which the well known statement was made."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullahi Nur whose telephone number is (571) 270-1298. The examiner can normally be reached on Monday - Friday, 8 a.m. to 5p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abdullahi Nur AN

Patent Examiner

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